

Bench meters

Simplify your pH analysis

Orion Lab Star PH111 pH/mV bench meters

Measure pH or ORP using the Orion Lab Star PH111 pH/mV Bench Meter.

Benefits

- Budget-friendly pH meter for simplified pH and ORP testing
- Large 5" backlit display makes viewing measurements easy
- Small meter footprint saves valuable bench space in your lab
- Date and time stamped logs support GLP compliance
- View active calibration logs with date and time to help ensure accuracy
- 500-point log with date and time to track critical data
- Output data and calibration logs to a printer or computer for long-term data storage

The Thermo Scientific™ Orion™ Lab Star PH111 pH/mV Bench Meter is ideally suited for laboratories with users of varying levels of technical expertise and who require a simple-to-calibrate and use meter for routine pH testing. Scientists have trusted Thermo Scientific Orion Lab Products for over 60 years to provide them with accurate and reliable analytical testing instruments in the lab and in the field.

Measure pH or ORP simultaneously with mV and temperature using the Orion Lab Star PH111 pH/mV Bench Meter. To enable comprehensive measurement capabilities, measure pH in a range of -2.000 to 18.000 pH, measure ORP in a range of -2000.0 to +2000.0 mV and measure temperature in a range of -5.0 to 105.0 °C or 23.0 to 221.0 °F.

For proficient SOP compliance, perform one-to-five-point pH calibrations, one-point ORP calibrations, and one-point temperature adjustment calibrations.

Use the onscreen stabilizing and ready indicators to help identify when pH meter and ORP meter readings are complete. The pH electrode condition icon helps ensure reliable electrode performance throughout your testing.

View active pH, ORP and temperature calibration logs with date and time stamp to ensure accurate, reproducible measurements. Record key measurements using the 500-point data log with date and time stamp. Output data logs and calibration logs to a printer or computer for long-term data storage.

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Product feature highlights



Stabilizing and ready indicators identify when measurements are complete

Large 5" display with backlight to improve ease of viewing and recording measurements

Large primary pH or ORP measurement shown simultaneously with mV and temperature measurements

Durable membrane keypad to support rugged lab use and disinfection needs

Small footprint to save bench space



IP-54 rated housing protects meter against spills, splashes and dust intrusion

Export data to computer or printer for long-term data storage

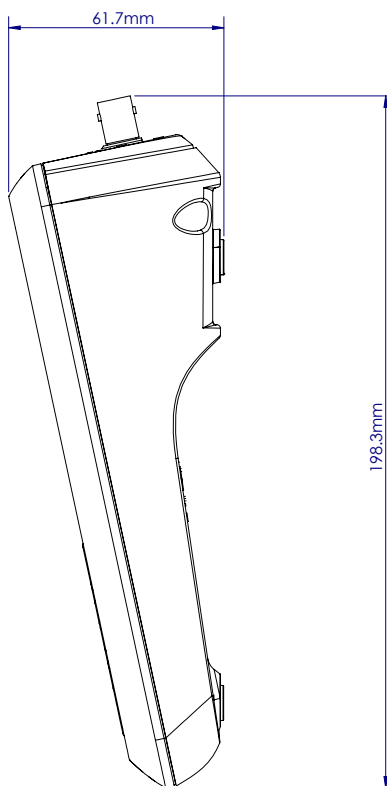
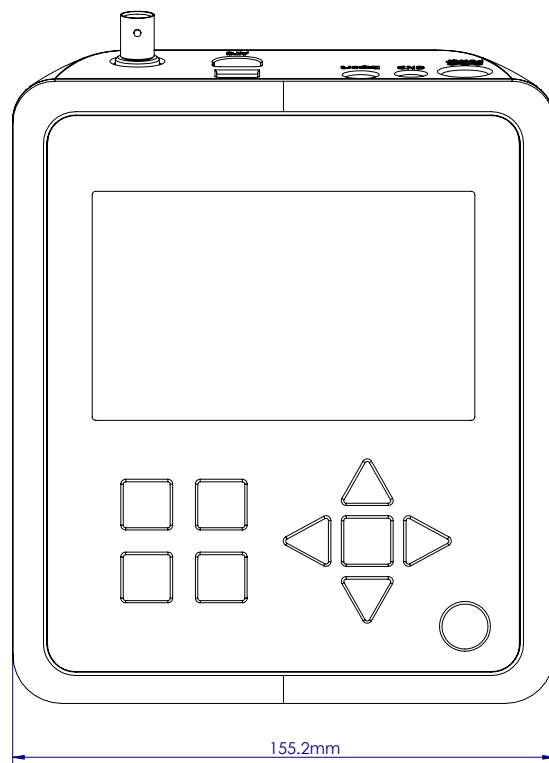
Twist-and-lock power adapter keeps power supply securely attached to meter

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Product specifications

Parameter	Description
pH	
Range	-2.000 to 18.000 pH
Resolution	0.1, 0.01, 0.001 pH
Relative accuracy	±0.005 pH ± 1 LSD
Calibration points	1 to 5 points
Calibration method	Automatic buffer recognition with manual buffer entry option
Calibration pH buffer sets	USA: 1.68, 4.01, 7.00, 10.01, 12.46 DIN: 1.68, 4.01, 6.86, 9.18, 12.46
Slope display	Yes
mV / ORP	
Range	±2000 mV
Resolution	0.1 mV
Relative accuracy	±0.2 mV or ±0.05 % of the reading, whichever is greater
Calibration points	1 point
Offset adjustment	Up to ±250 mV
Temperature	
Range	-5.0 to 105.0 °C, 23.0 to 221.0 °F
Resolution	0.1 °C, 0.1 °F
Relative accuracy	±0.3 °C, ±0.5 °F
Calibration points	1 point
Offset adjustment	Up to ±5 °C
Features	
Display	5" backlit LCD
Time and date	Yes
Time format	12 hour AM/PM or 24 hour
Date format	Selectable, DD-MM-YYYY or MM-DD-YYYY
Read types	Continuous, Auto-Read, Timed
Timed interval	5 seconds to 60 minutes
Data log	500 sets with time and date
Calibration log	Active pH, ORP, temperature with time and date
Calibration alarm	Yes, 1 to 168 hours or off
Sleep mode	Yes, optional
Self-test	Automatic with startup
Memory	Non-volatile
Input	BNC, ATC
Data output	Computer or printer
Data output format	CSV or print
Warranty	3 years
Certifications	CE, cTUVus, FCC Class B, CES-001, KC, RCM
Enclosure	IP-54
Power	100-240 VAC, 50-60Hz, 9 DC adapter, 1.3A
Dimensions (L x W x H)	198.3 mm x 155.2 mm x 61.7 mm, 7.81" x 6.11" x 2.43"
Weight	700 grams, 1.54 lbs.
Environmental conditions	
Environmental conditions	Indoors
Altitude	Up to 2,000 Meters
Operating temperature	5°C to 45°C
Operating relative humidity	5 to 85%, non-condensing
Storage temperature	-20°C to 60°C
Storage relative humidity	5 to 85%, non-condensing
Mains fluctuation	±10% of range (100-240VAC)
Installation category	II
Pollution degree	2
Protection class	III

Meter dimensions



Orion Lab Star Meter and Meter kit options

Select catalog number **LSTAR1110** for the pH meter and stand option, which allows you to purchase your pH electrode separately.

Select catalog number **LSTAR1115** for the standard pH meter kit option, for common pH samples such as drinking water, tap water, buffers (non-TRIS) and general purpose student use.

Select catalog number **LSTAR1116** for the easy-to-clean bio pH meter kit option, for pH samples containing TRIS buffers, proteins, sulfides, halides or other components that can interfere with silver-chloride; the included refillable pH electrode is easy-to-clean and restore.

Select catalog number **LSTAR1117** for is the low-maintenance bio pH meter kit option, for pH samples containing TRIS buffers, proteins, sulfides, halides or other components that can interfere with silver-chloride; the included gel-filled pH electrode is low-maintenance and easy to operate.

Select catalog number **LSTAR1118** for the difficult sample pH meter kit option, for pH samples that are thick, viscous or semi-solid including foods, beverages, wastewaters, emulsions, soils, slurries, suspended solids or sludges.

Ordering Information

Description	Cat. No.
Thermo Scientific Orion Lab Star PH111 pH/mV Bench Meter with electrode stand, PC cable and universal power adapter	LSTAR1110
Thermo Scientific Orion Lab Star PH111 pH/mV Bench Meter standard kit, includes meter with electrode stand, PC cable, universal power adapter, 9157BNMD refillable epoxy-body pH/ATC electrode, 916099 pH buffer and solution kit	LSTAR1115
Thermo Scientific Orion Lab Star PH111 pH/mV Bench Meter easy-to-clean bio kit, includes meter with electrode stand, PC cable, universal power adapter, GD9156BNWP double junction refillable epoxy-body pH electrode, 927007MD stainless steel ATC temperature probe, 916099 pH buffer and solution kit	LSTAR1116
Thermo Scientific Orion Lab Star PH111 pH/mV Bench Meter low-maintenance bio kit, includes meter with electrode stand, PC cable, universal power adapter, GD9106BNWP double junction gel-filled epoxy-body pH electrode, 927007MD stainless steel ATC temperature probe, 916099 pH buffer and solution kit	LSTAR1117
Thermo Scientific Orion Lab Star PH111 pH/mV Bench Meter difficult sample kit, includes meter with electrode stand, PC cable, universal power adapter, 9165BNWP Sure-Flow refillable epoxy-body pH electrode, 927007MD stainless steel ATC temperature probe, 916099 pH buffer and solution kit	LSTAR1118
Thermo Scientific Orion Electrode Arm with meter-attached bracket for Orion Lab Star meters	LSTAR-ARM
Thermo Scientific Orion Twist-and-Lock Universal Power Adapter for Orion Lab Star meters; 100-240V, 50/60Hz	LSTAR-PWR
Thermo Scientific Orion USB Computer Cable for Orion Lab Star meters	LSTAR-USB
Thermo Scientific Orion Dust Cover for Orion Lab Star meters	LSTAR-CVR
Thermo Scientific Orion Compact Ink-ribbon Printer for Orion Lab Star meters; 100-240V, 50/60Hz	STARA-106
Thermo Scientific Orion Replacement Ink Ribbon for compact printer, 6 pack	STARA-108
Thermo Scientific Orion Replacement Paper for compact printer, 5 pack	STARA-109